A New Species of *Vasum* (Gastropoda: Turbinellidae) from off Somalia

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ABSTRACT

Vasum stephanti new species is described from moderately deep water off Cape Gardafui (Ras Asir), Somalia and compared with congeners.

INTRODUCTION

In the past few years, deep-sea commercial fisheries operations off the northeastern coast of Somalia have resulted in the discovery of several new or otherwise interesting species of mollusks. Lorenz (1987:11) described *Pseudosinnia wieseorum* new species from the region off Cape Ras Hafun in about 300 m, and recorded the presence of *Festilyria festiva* (Lamarck, 1811), *Strombus oldi* Emerson, 1965, and *Cypraea broderipii* Sowerby, 1832, from the trawl samples. Waller (1986:39–46) described *Somalipecten cranmerorum* new genus, new species, from "off Somalia, depth 150–300 m", obtained from Taiwanese fishermen, and also provided a list of associated species. Another species recently described from off Somalia is *Volutocorbis rosavittoriae* Rehder, 1981.

Through the good offices of John Bernard, our attention was called to an unnamed species of *Vasum* trawled in Somalian waters. We take pleasure in describing this new species in honor of Adolphe Stephant, who obtained the specimens from Danish shrimpers and generously provided Mr. Bernard with the data and specimens. Other species of mollusks reported by Mr. Stephant (*in litt.*, August 19, 1987) to have been taken during these trawling operations include *Festilyria festiva*, *Strombus oldi*, *S. plicatus* (Röding, 1798), *Phalium microstoma* (von Martens, 1901), *P. bituberculosum* (von Martens, 1903), *Ficus investigatoris* (E. A. Smith, 1894), *Cymatium ranzanii* (Bianconi, 1851), *Bufonaria fernandesi* Beu, 1977, *Vasum crosseanum* (Souverbie, 1875), *Tudicula zanzibarica* Abbott, 1958, *Metula boswellae* Kilburn, 1975, *Cucullaea labiata* (Lightfoot, 1786), and *Chlamys townsendi* (Sowerby, 1895).

SYSTEMATICS

Family **Turbinellidae** Swainson, 1840
Subfamily **Vasinae** H. & A. Adams, 1853

Genus *Vasum* Röding, 1798

Remarks: See Abbott (1959) and Vokes (1966) for reviews of this subfamily.

Vasum stephanti new species
(figures 1–6)

Diagnosis: Similar to *Vasum tubiferum* (Anton, 1839) in general appearance, but differs in having a more triangular outline, three equally well-developed columellar plaits (in place of three major, plus one or two minor plaits), a nearly uniformly milk-white shell with a white, glazed aperture and parietal wall (compared to an orange-brown to yellowish shell with the parietal wall a light tan with very large splotches of chestnut to purple-brown), and in the presence of two or three rows of spines at base of shell (instead of one row).

Description: Shell moderately large for genus, attaining 108+ mm in length. Solid, heavy, turbinate, and strongly spined. Spire elevated with a short, smooth, bulbous nucleus of 1½ whorls (figures 5, 6). Postnuclear whorls 7 (adult specimens lack complete spires), the body whorl with 7 to 8 well-developed, curved to strongly recurved, flaringly grooved and terminally open, subsutural spines.

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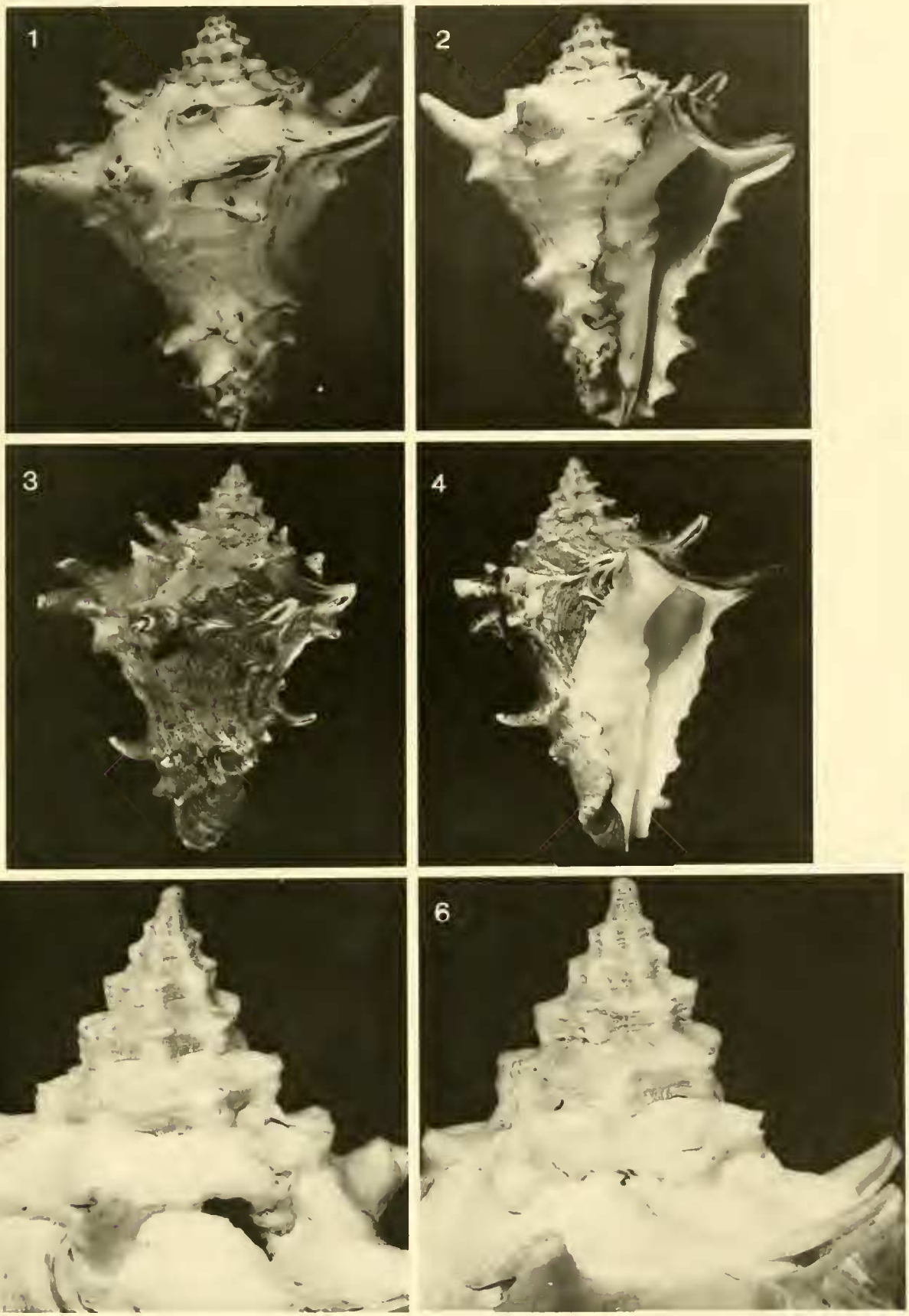
Figures 1–6. *Vasum stephanti* new species. **1, 2.** Paratype, AMNH 225988. **3, 4.** Holotype, AMNH 225987. **5, 6.** Paratype, AMNH 225989 (details of spire). All from type locality: off Cape Gardafui, Somalia, see text; figures 1–4 approximately × ⅔, figures 5, 6, × 2.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A row of similar but much shorter spines below the first row, followed by 5 coarse spiral cords and intervening raised lines. Base of shell with 2 to 3 spiral rows of moderately developed, groove spines and lower surface with weakly developed spiral lines. Parietal wall thickened, slightly raised, glazed. Columella with 3 plicae, posterior 2 better developed; first posterior plica semibifid in 1 specimen. Outer lip moderately thin, slightly reflected, crenulated. Umbilicus funnel-shaped and in most specimens widely open. Base color of shell milky white, spire stained buff. Columella glazed. Aperture white, with a slight bluish tinge. Periostracum moderately thick, tannish brown, and somewhat foliaceous. Soft parts not seen. Operculum brown, corneous, unguiculate, apically nucleate, filling most of the aperture with foot fully withdrawn. Inner surface marginally thickened on basal and abcolumellar sides, central area depressed and with irregular concentric rings; outer surface scabrous.

Type locality: 13–16 km east, 80–96 km south of Cape Gardafui (Ras Asir), Somalia, trawled by shrimp fisherman in 183 to 220 m, December, 1986.

Range: Known only from the type locality and in the Gulf of Aden off the Bari coast of Somalia.

Material examined: Holotype, AMNH 225987, 102.36 mm, *ex* E. Schelling Collection (figures 3, 4); paratype 2, AMNH 225988 (figures 1, 2), paratype 5, AMNH 225989 (figures 5, 6), paratype 8, AMNH 225990, *ex* J. Bernard Collection; paratypes 1, 3, 4, 7, 9 J. Bernard Collection; paratypes 6, 10 A. Stephant Collection, all from the type locality; referred specimen, H. Lee Collection, Alula, Bari coast, Somalia (see Table 1).

Remarks: As noted above, *Vasum stephanti* new species most closely resembles in shell morphology the endemic Philippine (Cuyo-Palawan group) species *V. tubiferum* (Anton, 1839:70; Kobelt, 1876:155, pl. 9, fig. 3; Abbott, 1959:20, pl. 4, fig. 1; Springsteen & Leobrera, 1986:105, pl. 28, fig. 6). Anton's taxon and the closely related *V. turbinellus* (Linné, 1758:750; Abbott, 1959:17, pl. 1, figs. 2, 3), which ranges from East Africa to the western Pacific, are inhabitants of shallow water, as are the other four Indo-Pacific species assigned to *Vasum* (*sensu stricto*) by Abbott (1959). One of these, *V. rhinoceros* (Gmelin, 1791), from Kenya and Tanzania, is somewhat similar but has a lower-spired, heavier shell with massive nodules, thickened and reflected outer lip, and a brown-blotched to light yellow parietal wall (Abbott, 1959:21, pl. 4, figs. 3, 4). Strongly spinose specimens with immature outer lips of the Brasilian *V. cassiforme* (Kiener, 1840), cited from low tide to 60 m (Rios, 1985:115), are superficially similar to the new species. (See Abbott & Dance, 1982:209, 210 for polychrome illustrations of these taxa.) The Australian *Altivasum* Hedley, 1914, and several species of Indo-Pacific *Tudicula* H. & A. Adams, 1864 are known to occur in moderate depths (to 220 m).

Some of the spinose species originally assigned to *Tudicula* (*e.g.*, *T. zanzibarica* Abbott, 1958, from the western Indian Ocean, and *T. rasilistoma* Abbott, 1959), from off Queensland, Australia, may prove to be referable to *Vasum* when the soft anatomy is known. The weakly spinose *V. crosseanum* (Souverbie, 1875), from the Indian Ocean, appears to be closely related to *T. rasilistoma*. The development of long spines in the species described herein may reflect the deeper-water habitat.

Table 1. *Vasum stephanti* new species. Shell measurements in mm and number of whorls; width measured including spines. n = 12. Spires incomplete except for 5, 10.

	Length	Width	# Whorls
Paratype 1	107.68	97.88	6
Paratype 2	106.75	97.11	6
Holotype	102.36	82.70	6
Paratype 3	97.72	82.08	6
Paratype 4	97.10	84.19	6
Paratype 5	95.53	77.93	8½
Paratype 6	86.22	73.47	6
Paratype 7	78.75	64.10	5
Paratype 8	73.68	57.18	5
Paratype 9	66.87	67.25	5
Referred	63.47	52.78	5
Paratype 10	56.92	55.79	4½

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